DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-012970
Date Inspected: 06-Apr-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 630
OSM Departure Time: 1500
Location: Job Site

CWI Name: Mike Johnson, Bnifacio Daquinag, Tom Pasqualone

CWI Present:	☑ Yes	☐ No					
Inspected CWI report:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☐ Yes	☑ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG 1W/2W-A, 1E/2E-E

Summary of Items Observed:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 1W/2W-A1/A5, 1E/2E-E1/E2, and the following observations were made:

1W/2W-A1/A5

Upon the arrival of the QA Inspector it was randomly observed the ABF welding operators Jordan Hazelaar and Bryce Howell were setting up the submerged arc welding (SAW) machines in preparation of performing the SAW root pass. The QA Inspector noted the shielded metal arc welding (SMAW) full length tack weld was previously deposited on both sides of the weld joint against the bevel and the steel backing bar. The QA Inspector randomly observed the ABF welding personnel had pre determined and indicated with a distinguishing mark on the base material the sequencing in which the joint would be welded. The QA Inspector observed the weld was broken into 5 sections beginning in the center and moving outward toward the edges of deck plate. The QA Inspector randomly observed the SE QC Inspectors had signed off and accepted the fit up, in the designated field chart directly on the base material adjacent to the weld joint. The QA Inspector noted the fit was previously determined by the QC and Caltrans QA Inspectors to be unacceptable for planar misalignment and gaps between the steel backing bar and bevel exceeding 2mm. The QA Inspector asked the ABF Welding Quality Control Manager (WQCM) Jim Bowers about the issue. (see summary of conversation)

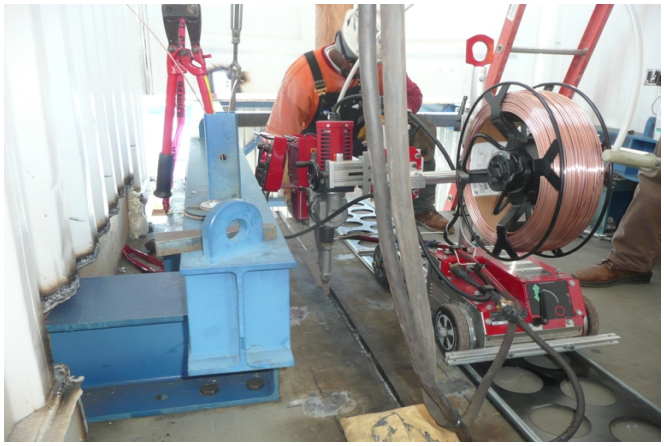
The QA Inspector randomly observed the ABF welding operator Jordan Hazelaar begin welding the SAW root pass in the center of A3 and weld to the end of section A5. The QA Inspector randomly observed the SAW parameters and they were 560 Amps, 32.5 Volts and a travel speed of 370mm/min. The QA Inspector noted the

SAW parameters appeared to be in general compliance with ABF-WPS-D1.5-4042B-1. After the root pass was completed between the center of A3-A5 the SE QC Inspectors performed MT of the root pass. The QA Inspector noted no relevant indications were located at the time of the testing.

The QA Inspector randomly observed the ABF welding operator Bryce Howell begin welding the SAW root pass in the center of A3 and weld to the end of section A1. The QA Inspector randomly observed the SAW parameters and they were 561 Amps, 32.8 Volts and a travel speed of 390mm/min. The QA Inspector noted the SAW parameters appeared to be in general compliance with ABF-WPS-D1.5-4042B-1. After the root pass was completed between the centers of A3-A1 the SE QC Inspectors performed MT of the root pass. The QA Inspector noted several Mt indications were located by the QC Inspector Bnifacio Daquinag and Tom Pasqualone. The QA Inspector noted the MT indications were produced due to slag trapped near the toe of the weld. The QA Inspector randomly observed the slag was removed by wire wheel and grinding disc. The areas were re-inspected and no relevant indications were located at the time of the testing. The QA Inspector noted after the MT was completed on the SAW root pass the ABF welding operators continued with the SAW fill passes for the remainder of the shift.

1E/2E-E2

The QA Inspector randomly observed the ABF welders Jeremy Doleman and Rory Hogan performing flux cored arc welding the in 4G position at the above identified location. The QA Inspector noted ABF welders were welding the final 3 meters of the FCAW back weld in the above identified weld segment. The QA Inspector randomly observed the induction heating blankets were previously installed and turned on, maintaining the minimum required preheat of 150°F. The QA Inspector noted the SE QC inspector Mike Johnson was on site monitoring and recording the in process production welding. The QA Inspector randomly observed the FCAW parameters and they appeared to be in general compliance with ABF-WPS-3042A-1. The QA Inspector noted the FCAW cover pass was completed on the QA Inspectors shift.



Summary of Conversations:

The ABF WQCM Jim Bowers informed the QA Inspector, the SE QC Inspectors will sign off the fit up regardless of the condition of the misalignment or gaps at the steel backing. Mr. Bowers explained there is an RFI allowing ABF to repair the misalignment on a case by case basis. The WQCM went on to explain, ABF can wait for the response nor the corrective action on how to correct the misalignment due to production reasons. The WQCM informed the QA Inspector the QC Inspectors daily fit up inspection report will explain the fit up was accepted for

areas which were in compliance with AWS D1.5-02 and call out the areas that were not in compliance and note the areas not in compliance were rejected.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer